LIVING WITH GAS INFRASTRUCTURE IN THE ERA OF FRACKING

The Story of Minisink, NY

Minisink Says NO COMPRESSOR STATION

www.stopmcs.org
Who are we and where are we?
Small Town vs Big Gas

Would you let your children breath in air from this thing? If not, why ours?
Town of Guns n’ Hoses
The smoke stacks will emit “nothing but water vapor”, Joseph Shields, President of Millennium Pipeline statement at the Minisink Open House
Millennium’s actual air permit application, amended days before EA was issued.

Over 60,000 tons of GHGs annually and over 100 tons of known carcinogens and neurotoxins.
Compressor stations along pipelines are used to push the natural gas through the pipeline.

The compressors release combustion products, nitrogen oxide and volatile organic hydrocarbons into the air and degrade the air quality.

The combustion products combine with the volatile organic compounds released by the compressors and heat and sunlight to produce ground level ozone.

Ground level ozone impacts the respiratory system, lung function and cardiovascular system.
Minisink With Infra-red camera
People near 'fracking' wells report health woes

Wendy Koch, USA TODAY
12:03 a.m. EDT September 10, 2014

People living near natural-gas wells were more than twice as likely to report upper-respiratory and skin problems than those farther away, says a major study Wednesday on the potential health effects of fracking.

Nearly two of every five, or 39%, of those living less than a kilometer (or two-thirds of a mile) from a well reported upper respiratory symptoms, compared to 18% living more than 2 kilometers away, according to a Yale University-led random survey of 492 people in 180 households with ground-fed water wells in southwestern Pennsylvania.

The disparity was even greater for skin irritation. While 13% of those within a kilometer of a well said they had rashes and other skin symptoms, only 3% of those beyond 2 kilometers said the same.

“This is the largest study to look at the overall health of people living near the wells,”
Air monitoring in fracking areas fails to detect spikes in toxic emissions, new study says

Two people in natural gas drilling areas who complain about nauseating odors, nosebleeds and other symptoms they fear could be caused by shale development usually get the same response from state regulators: monitoring data show the air quality is fine.

A new study helps explain this discrepancy. The most commonly used air monitoring techniques often underestimate public health threats because they don’t catch toxic emissions that spike at various points during gas production, researchers reported Tuesday in the peer-reviewed journal Reviews on Environmental Health. The study was conducted by the Southwest Pennsylvania Environmental Health Project, a nonprofit based near Pittsburgh.

A health survey the group released last year found that people who live near drilling sites in Washington County, Pa., in the Marcellus Shale, reported symptoms such as nausea, abdominal pain, breathing difficulties and nosebleeds, all of which could be caused by pollutants known to be emitted from gas sites. Similar problems have been reported by people who live in the Eagle Ford Shale in South Texas, the subject of a recent investigation by the Center for Public Integrity, InsideClimate News and The Weather Channel.
October 2012 Venting

Ramapo NY.... in an email the mother wrote “On Oct 11 the smell of gas in our house was so bad I had to call 911, on Oct 13 my son broke out in this rash”.

Minisink, NY
SEPTEMBER 7th, 7pm
Lack of emergency protocol at Minisink Compressor Station

Yesterday evening residents on Jacobs Road and the surrounding areas became alarmed when they smelled the odor “associated with natural gas” and heard an alarm going off. It was overpowering and (for an area of homes that do not have natural gas service) concerning, since the only facility that houses natural gas is the 12000 hp compressor station on Jacobs Rd, and its associated pipelines. Residents alerted local fire departments, who responded to the scene quickly. Upon arrival, the fire department was greeted by a closed gate. They waited for close to an hour for a Columbia Gas representative to show up. During that time, all access to Jacobs Road was closed off by emergency personnel and other local fire services were also on standby.
Resident from Minisink days after the Sept 7th Gas Leak

Hi Pramilla,

During the last 2 or 3 months or son has been having nose bleeds which seem to be increasing. Just this week alone he has had 3. He woke up Thursday morning crying so loud complaining of headache on one side of his head only (migraine?) And he vomited a few times.

I remember when i was younger i used to have nose bleeds as well but i cannot remember how frequent. I am seriously wondering if it's something in the air coming from the compressor station.

I have been feeling lazy, weak, and unfocused at times myself. I constantly hear the releases coming from the compressor during the middle of the night and always hear the low frequency hum.

I am very interested in the air health study please let me know.

Thanks

XXXX
Metering stations also toxic required every 10 miles
Child living near metering station. photos taken before the compressor station was built.
Family moved away after project received approval.
Nose bleeds, abdominal pain, swollen joints, unexplained rash April 17, 2012...

My husband and I just cannot fathom how a Natural Gas Compressor Station can be allowed to be built in the middle of a residential / agricultural area. Especially since there are houses so close to the site where the proposed Natural Gas Compressor Station will be built. God For Bid something was to go wrong at the Compressor station. What will happen to those families? What about the harmful toxins all of the residents of Westtown will be forced to breathe in every day? We did not ask for a Natural Gas Compressor Station to come to our quiet, peaceful, neighborhood. We as a community do not want that here. We as a community are afraid of the health impacts that our families may suffer.

My husband and I made the decision to move to Westtown from Long Island in 2004 to give our children a better way of life and grow up in the country. We wanted our children to grow up surrounded by trees, farm animals and the wildlife that live in our backyard. We did not move to a residential / agricultural area to have it turned into an industrial area. Never in our wildest dreams did we ever think a Natural Gas Compressor Station could come into such an area. My husband drives an hour and a half each way to commute into Queens to go to work. He made this sacrifice so our family can live in the country not an industrial area.

Ever since the Gas Metering Station was built on County Route 284 in Westtown my 17 year old daughter has been experiencing some unusual health problems. It first started at the end of the summer, some where around the end of August beginning of September. At that time both of my daughters ages 17 & 9 had nose bleeds on and off for about a week. (my girls do not normally have nose bleeds, actually I believe that this was the first time for both of them). Since then my 17 year old daughter has been extremely tired, has had joint pain, swollen joints, (finger, knee, toe) abdominal pain, and an unexplained rash. Just recently she has had a sore throat, swollen neck and her nose bleeds have started again. She has been tested for Lyme, Mononucleosis, Epstein Bar, Lupus, Rheumatoid Arthritis, Crohns Disease, Celiac Disease and all results have come back negative. My 9 year old daughter has not had any more nose bleeds, but she seems to be very tired, often irritable and complains of joint pain. My husband has also been extremely tired, joint and muscle aches and has complained that his bones feel like they ache. He has also had extreme nasal problems. He wakes up every morning with a crusty nasal passage. I have also been tired, irritable, and have had muscle and joint pain. I often wonder if these symptoms are due to the Gas Metering Station near our home.
Health Impacts Associated With Living near Compressor Stations and Gas Metering Stations Along Gas Transmission Pipelines

- Nasal Irritation
- Throat Irritation
- Eyes Burning
- Frequent Nausea
- Sinus Problems
- Bronchitis
- Increased Fatigue

- Muscle Aches and Pains
- Severe Headaches
- Dizziness
- Weakness and Tired
- Decreased Motor Skills
- Depression
- Frequent Irritation
- Severe Anxiety

61% of Health Impacts are associated with chemicals present in the air in excess of Short and Long Term Health Screening Levels
Health Impacts Associated With Living near Compressor Stations and Gas Metering Stations Along Natural Gas Transmission Pipelines

- Health Symptoms Associated With Chemicals Detected in the Air
  - Allergies
  - Persistent Cough
  - Shortness of Breath
  - Frequent Nose Bleeds
  - Sleep Disturbances
  - Joint Pain
  - Difficulty in Concentrating
  - Nervous System Impacts
  - Forgetfulness
  - Sores and Ulcers in Mouth
  - Thyroid Problems
Chronic Health Impacts Experienced by Individuals Living and Working near Compressor Stations

- Damage to Liver and Kidneys
- Damage to Lungs
- Damage to Cardiovascular System
- Damage to Developing Fetus
- Reproductive Damage
- Mutagenic Impacts
- Developmental Malformations
- Damage to Nervous System
- Brain Impacts
- Leukemia
- Aplastic Anemia
- Changes in Blood Cells
- Impacts to Blood Clotting Ability
Chemicals Released into the Air from Compressor Facilities

- Benzene
- Toluene
- Ethylbenzene
- Xylenes
- 1,3-Butadiene
- n-Butyl Alcohol
- Carbon Disulfide
- Carbonyl Sulfide
- Chlorobenzene
- Chloromethane
- 1, 2-Dichloroethane
- Diethyl Benzene
- Dimethyl Disulfide
- Formaldehyde
- Methyl Ethyl Disulfide
- Naphthalene
- 1,1,1, 2-Tetrachloroethane
- Trichloroethylene
- Trimethyl Benzene
- 1,2,4-Trimethyl Benzene
- Styrene
- Methane
- Ethane
- Butane
- Propane
- Nitrogen Oxide
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Maximum Radium Activities Measured in Brines and Produced Waters

- Marcellus Sh., PA & NY [14,17,19]
- Non-Marcellus, PA & NY [14,17,19]
- Texas and Louisiana [6]
- USA, General [6,23,25,30]
- Mediterranean [1,21,27]
- Norway and UK [2]
- Brazil, Congo, and Australia [2,27]

pCi/L

0 5,000 10,000 15,000 20,000

Ra-226

Ra-228
SUMMARY

- Because of their elevated organic carbon and clay contents, marine black shales have propensity to contain elevated uranium, thorium, and daughter isotopes.
- Radionuclides, particularly radium, can dissolve and be mobile in groundwaters and more so in brines.
- Radium brought to ground surface in the produced waters.
SUMMARY

- Radium isotopes precipitate in pipes (scale) and adsorb to sediments and sludges, causing activities to be elevated in those waste byproducts.
- Radium decays to radon, causing some concern of radon at the wellhead and in the pipeline gas during production.
TENORM Study

Future Work:

• Continued Well Pad Sampling
• Third Round of WWTP Sampling
• Continued Landfill Leachate Collection
• Beneficial Use Sites
• Pipe Disposal/Refurbishing Facilities
• Gas Fired Power Plants, Compressor Stations, and Processing Facilities
Why should we care

- We are all interconnected
- Food Shed, Water Shed, and Air Shed
- All Downwind
- NY Milk Supply
- Black dirt region
- Poisons and risks
- travel with the gas

We've Got Milk...
But would you drink it?